Docket ID No. OW-2004-0010
Proposed Rule - 40CFR131 Water Quality Standards for Coastal and Great Lakes Recreation Waters

Sir or Madam:

These comments are being submitted by the Department of Environmental Services of the City and County of Honolulu.

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Summary of Comments

The EPA has determined that the State of Hawaii Water Quality Standards (WQS) do not satisfy BEACH Act requirements and is therefore proposing to apply the 35 cfu/100 ml enterococcus geometric mean and single sample maximum criteria to Open Coastal Waters, i.e. marine waters up to 600 feet deep. We firmly believe that these criteria should not be applied to the entire Open Coastal Waters zone because "swimming, bathing, surfing or similar water contact activities" do not take place up to the 600-foot depth. Section 11-54-08(b) of the WQS already specifies an enterococcus GM standard for marine recreational waters within 1000 feet of shoreline. We feel that the determination of the appropriate primary contact activity zone should be left up to DOH, who has primacy on water quality standards for the State of Hawaii.

The Department of Environmental Services owns and operates four wastewater treatment plants that discharge treated wastewater through deep ocean outfalls. We will be significantly impacted if the proposed marine recreational water quality criteria are applied because we may be required to unnecessarily upgrade existing treatment processes or install new disinfection facilities. Our monitoring of the bacterial water quality and other WQS parameters in the vicinity of these outfall discharges for over 20 years continues to show no impact to recreational public health.

We also submit other comments on single sample maximums, categories of coastal recreation waters, water column depths where the criteria apply and adoption of EPA-approved State criteria prior to APA rulemaking.

Application of EPA Marine WQ Bacterial Criteria to Hawaii Open Coastal Waters

On p. 41732 of the July 9, 2004 Proposed Rules, EPA is including Hawaii in the rulemaking because there are no numeric criteria protecting State waters beyond 300 meters from shore, although these waters are designated for recreation in the State's water quality standards. Further, on p. 41742, Sections 131.41(e)(2) and (3) propose to essentially apply marine waters criteria to Hawaii Open Coastal Waters. We feel that applying the marine waters criteria to the entire Open Coastal Waters zone, i.e. shoreline to 600-foot depth, is not in keeping with the BEACH Act of 2000 for the following reasons:

1. In Section 5 of the BEACH Act the term "Coastal Recreation Waters" includes:

   "(i) the Great Lakes and (ii) marine coastal waters (including coastal estuaries) that are designated under section 303(c) by a State for use for swimming, bathing, surfing, or similar activities."

   Primary contact activities such as swimming, bathing, surfing, do not occur in areas of 600-foot depth on Oahu, which lies over 1½ miles offshore.

2. Section 11-54-03 (c)(2) of the Hawaii Water Quality Standards (WQS) states:

   "It is the objective of class A waters that their use for recreational purposes and aesthetic enjoyment be protected."

   This applies to the Class A waters of the Open Coastal Waters zone (shoreline to 600-foot depth).

   There is no definition of "recreational purposes" in the WQS. It appears recreational purposes in this section of the WQS is not limited to just primary contact activities but any full contact or incidental contact recreational activity in Class A waters. Primary contact activities do not occur out to 600-foot depths. There may be incidental contact, which these proposed regulations are not addressing.

   Another reason why we feel that recreational purposes in this section of the WQS is not limited to only primary contact activities is that the WQS also specifies recreational use for deeper Class A Oceanic Waters. Oceanic waters means "all other marine waters outside of the 183 meter (600 feet or 100 fathom) depth contour". It appears that the intent is to protect deep ocean recreation e.g. sailing, and recreational purposes in the WQS covers general marine recreation. Of

course, it would be even more unlikely that primary contact activities would occur in waters outside of the 600-foot depth.

3. We believe that the intent of Section 11-4-8(b) Specific criteria for recreational areas of the Hawaii WQS is to protect the public health of recreational beach users as required by the BEACH Act. The shoreline to 300-meter from shore area is generally where primary contact activities occur, however a recreational survey would be in order to better determine where primary contact activities take place. Further, the existing enterococcus geometric mean limit of 7 c.f.u./100ml is the same type of limit found in the *1986 Ambient Water Quality Criteria for Bacteria.* When the State DOH adopted the 7 c.f.u./100 ml standard, they followed the 1986 document and used an illness rate of 10 per 1,000 swimmers instead of the 19, which correlated to geometric mean limit of 35 c.f.u./100 ml. We feel that the 7cfu/100 ml GM standard is overly restrictive and support EPA's proposal to apply the 35 cfu/100 ml GM standard to the shoreline to 300 meter area.

We recommend that the State Department of Health, City and County of Honolulu and other affected counties conduct a statewide recreational survey to determine where primary contact activities occur and where the 35 cfu/100 ml GM limit should apply. BEACH funds could be used to fund the survey. Until such time it is determined how far out from shoreline primary contact activities do occur, the EPA should not apply the 35 cfu/100 ml criterion for waters outside of 300 meters from shore.

Impact to City and County of Honolulu

The application of the 35 cfu/100 ml GM enterococcus standard to waters outside of 300 meters will be very costly to the City and County of Honolulu with no significant benefit. For many years, we have been complying with Section 11-4-8(b) of the WQS, which applies only to the waters inside 300 meters. Our NPDES permits require compliance with Section 11-4-8(b) and our receiving water monitoring programs include very intensive bacterial testing of shoreline and near shore waters. The health of beach users has not been impacted by our four deep ocean outfall discharges. Below is a detailed description of our four outfall systems and the specific cost impacts if the 35 cfu/100 ml GM limit is applied to waters up to 600 feet deep.

Sand Island Outfall

Description: Disposes of an average flow of 75 million gallons per day (mgd) of primary treated wastewater from the Sand Island WWTP, approximately 9,000 feet offshore at an average depth of 220 feet. Effluent is currently not disinfected but a UV disinfection facility is scheduled to begin operation in early 2005. A one-year bacterial study of the receiving waters will be conducted to determine the benefit and need for continuous disinfection.

Impact: We will not be able to comply with the 35 cfu/100 ml enterococcus GM average at the point of discharge. Effluent monthly GM averages for the Sand Island effluent

currently range from 3.2x10E6 to 4.9x10E6 cfu/100 ml (July 2003 – June 2004). The UV disinfection facility is designed to meet a maximum of 18,000 c.f.u./100 ml, as required by the NPDES permit. To meet the 35cfu/100 ml standard at point of discharge, we would have to construct secondary treatment to remove additional solids to allow the UV system to provide the required kill. Secondary treatment is estimated to cost $450 million in capital costs and $10 million in additional annual O&M costs.

Barbers Point Outfall

Description: Disposes of average flow of 22 mgd of primary treated wastewater from the Honouliuli WWTP, approximately 8,000 feet offshore at a depth of 200 feet. Effluent is currently not disinfected.

Impact: We will not be able to meet the 35 cfu/100 ml enterococcus GM criteria at the point of discharge. Effluent GM averages range from 276,355 cfu/100 ml to 575,249 cfu/100 ml (July 2003 – June 2004). Estimated cost is $90 million, which includes upgrade to secondary treatment to allow effective disinfection.

Mokapu Outfall

Description: Disposes of average flow of 18 mgd of secondary treated wastewater from the Kailua Regional WWTP, approximately 5,000 feet offshore at a depth of 100 feet. Effluent is currently disinfected by UV disinfection.

Impact: We will not be able to meet the 35 cfu/100 ml enterococcus GM criteria consistently at the point of discharge. Effluent GM averages range from 12 cfu/100 ml to 7,857 cfu/100 ml (July 2003-June 2004). The existing UV system may have to be upgraded to consistently meet the 35 cfu/100 ml GM criterion.

Waianae Outfall

Description: Disposes of average flow of 3.53 mgd of secondary treated wastewater from the Waianae WWTP, approximately 6,184 feet offshore at a depth of 105 feet. Effluent is currently not disinfected.

Impact: We will not be able to meet the 35cfu/100 ml enterococcus GM criteria at the point of discharge. Effluent GM averages range from 20,000 cfu/100 ml to 49,827 cfu/100 ml (July 2003 – June 2004). A new UV disinfection system would have to installed to meet the 35 cfu /100 ml. Estimated cost of a disinfection facility is $2.0 million.

Other Comments

- Section 131.41(c)(2)

  We feel that single sample maximum (SSM) values should not be part of the WQS because the values were not determined from data taken from Hawaiian waters. The SSM values perhaps could be used to serve as triggers for beach closures or additional sampling. In this case, defining "coastal recreation water" categories would not be necessary.

  If single sample maximums are to be included in the WQS, coastal recreation waters should be categorized based on usage and not on the presence of a lifeguard, parking lot, public access, etc. We suggest a peak usage density figure (no. of users/per square mile) be used. For Hawaii, the peak usage densities could be determined as part of the beach user study proposed to be done jointly with State DOH and other counties.

  The proposed regulations do not address where the criteria would apply in the water column. We feel that in deeper waters, i.e. deeper than say 150 feet, the criteria should apply to only the surface because any primary contact activities would only occur on the surface. DOH should probably address this issue along with the determination of the primary contact activity zone.

- Section 131.41(d)(1)

  We concur that EPA-approved WQS criteria to address BEACH Act requirements should be the applicable criteria without first undertaking APA rulemaking to withdraw the Federal rule. Delays in APA rulemaking would require affected dischargers to comply with Federal criteria and expose them unnecessarily.